



STATE OF MAINE
DEPARTMENT OF ENVIRONMENTAL PROTECTION

JOHN ELIAS BALDACCI
GOVERNOR

DAVID P. LITTELL
COMMISSIONER

**Bangor Historic Track, Inc.
Penobscot County
Bangor, Maine
A-1006-71-A-N (SM)**

**Departmental
Findings of Fact and Order
Air Emission License
After the Fact**

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., §344 and §590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

1. Bangor Historic Track, Inc. (BHT), also known as Hollywood Slots, has applied for an Air Emission License permitting the operation of emission sources associated with their facility.
2. Application for an air emission license was received after BHT had commenced construction, installation, and startup of the equipment. Therefore, this application is considered to be "after the fact."
3. The equipment addressed in this license is located at 500 Main Street, Bangor, Maine.

B. Emission Equipment

The following equipment is addressed in this air emission license:

Electrical Generation Equipment

<u>Equipment</u>	<u>Maximum Capacity</u>	<u>Firing Rate (gal/hr)</u>	<u>Fuel Type, % sulfur</u>
Generator #1	19 MMBtu/hr 2000 ekW	138.9	diesel, 0.05%

AUGUSTA

17 STATE HOUSE STATION
AUGUSTA, MAINE 04333-0017
(207) 287-7688 FAX: (207) 287-7826
RAY BLDG., HOSPITAL ST.

BANGOR
106 HOGAN ROAD
BANGOR, MAINE 04401
(207) 941-4570 FAX: (207) 941-4584

PORTLAND
312 CANCO ROAD
PORTLAND, MAINE 04103
(207) 822-6300 FAX: (207) 822-6303

PRESQUE ISLE
1235 CENTRAL DRIVE, SKYWAY PARK
PRESQUE ISLE, MAINE 04769-2094
(207) 764-0477 FAX: (207) 760-3143

Boilers / Heaters

<u>Equipment</u>	<u>Maximum Capacity (MMBtu/hr)</u>	<u>Maximum Firing Rate (scf/hr)</u>	<u>Fuel Type</u>
ERU-1	2.63	2553	natural gas
ERU-2	2.63	2553	natural gas
ERU-3	2.63	2553	natural gas
MAU-1	1.05	1019	natural gas
MAU-2	1.05	1019	natural gas
MAU-3	1.05	1019	natural gas
B-1	3.00	2912	natural gas
B-2	3.00	2912	natural gas
B-5	2.00	1941	natural gas
HWH-1	1.70	1650	natural gas
HWH-2	1.70	1650	natural gas
HWH-3	1.50	1456	natural gas
HWH-4	1.50	1456	natural gas

C. Application Classification

The new source is considered a major source based on whether or not expected emissions exceed the "Significant Emission Levels" as defined in the Department's regulations. The emissions for the new source are determined by the maximum future license allowed emissions, as follows:

<u>Pollutant</u>	<u>Max. Future License (TPY)</u>	<u>Sig. Level</u>
PM	1.1	100
PM ₁₀	1.1	100
SO ₂	0.3	100
NO _x	16.2	100
CO	4.8	100
VOC	0.5	50

The Department has determined the facility is a minor source and the application has been processed through *Major and Minor Source Air Emission License Regulations*, 06-096 CMR 115 (last amended December 24, 2005). With the operating hours restriction on Generator #1 the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for new sources and modifications requires a demonstration that emissions are receiving Best Available Control Technology (BACT), as defined in *Definitions Regulation*, 06-096 CMR 100 (last amended December 24, 2005). BACT is a top-down approach to selecting air emission controls considering economic, environmental and energy impacts.

B. Generator #1

BHT operates one back-up diesel generator.

Generator #1 was ordered after July 11, 2005 and manufactured after April 1, 2006. Therefore, Generator #1 is subject to New Source Performance Standards 40 CFR Part 60, Subpart IIII, *Standards of Performance for Stationary Compression Ignition Internal Combustion Engines*. BHT has provided documentation that their Caterpillar 3516CDITA engine is Tier 2 compliant.

Due to the potential for tight electricity supplies, ISO New England has taken several precautionary steps to ensure the reliability of the region-wide bulk power system. One of those steps is the implementation of the Demand Response Program. This program offers financial incentives to customers, such as BHT, to reduce electricity demand during peak periods. This program can significantly improve the reliability of the region-wide bulk power system and hopefully allow ISO New England to avoid drastic measures, such as brown outs.

In order for BHT to participate in the Demand Response Program, they need to start their generator and run it prior to, or in lieu of, loss of off-site power. BHT will only operate in this manner if there is a documented request from ISO New England under their emergency OP-4 procedures. ISO New England's OP-4 is a procedure which establishes criteria and guidelines for actions during capacity deficiencies. OP-4 is implemented when there is determined to be a serious threat to the integrity of the bulk power system. Therefore, the Department has agreed to redefine the term "emergency" as it applies to BHT's generator to include ISO New England OP-4 emergencies.

Therefore "Emergency Generator", as it applies to BHT, is defined as any stationary internal combustion engine whose operation is limited to emergency situations, required testing and maintenance, and ISO New England OP-4 emergencies. Examples include stationary engines used to produce power for critical networks or equipment (including power supplied to portions of a facility) when electric power from the local utility (or the normal power source, if the facility runs on its own power production) is interrupted, or stationary engines used to pump water in the case of fire or flood.

Additionally, BHT shall only be permitted to operate their generator in response to an OP-4 emergency for a total of no more than 50 hours each calendar year.

A summary of the BACT analysis for Generator #1 (2,000 ekW) is the following:

1. Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 500 ppm.
2. Beginning October 1, 2010, Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm.
3. Generator #1 shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. Generator #1 shall be limited to 50 hours per year of operation in response to an OP-4 emergency. Generator #1 shall be limited to 500 hours per year of total operation. All of these limits are based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours.
4. Generator #1 shall be equipped with a non-resettable hour meter.
5. 06-096 CMR 103 regulates PM emission limits. The PM₁₀ limits are derived from the PM limits.
6. NO_x, CO, and VOC emission limits are based upon AP-42 data dated 10/96.
7. BHT shall operate and maintain Generator #1 in accordance with the manufacturer's written instructions. BHT shall not change settings that are not approved in writing by the manufacturer.
8. Visible emissions from Generator #1 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period.

C. Natural Gas Fired Units

BHT operates many small natural gas fired units for facility heating and hot water needs. Most of this equipment is less than 1.0 MMBtu/hr and considered insignificant. However, the following units are large enough to necessitate inclusion in this air emission license: Air Handling Units ERU-1, 2, and 3, MAU-1, 2, and 3, Boilers B-1, B-2, and B-5, and Hot Water Heaters HWH-1, 2, 3, and 4.

None of the natural gas fired equipment is greater than 10 MMBtu/hr. Therefore, there is no equipment subject to New Source Performance Standards (NSPS) 40 CFR Part 60, Subpart Dc, *Standards of Performance for Small Industrial-Commercial-Institutional Steam Generating Units*, for units greater than 10 MMBtu/hr manufactured after June 9, 1989.

A summary of the BACT analysis is the following:

1. The total natural gas usage for the facility shall not exceed 20,000,000 scf/year based on a calendar year.
2. *Fuel Burning Equipment Particulate Emission Standard*, 06-096 CMR 103 (last amended November 3, 1990) regulates PM emission limits for Boilers B-1 and B-2. However, the BACT analysis determined a more stringent limit of 0.05 lb/MMBtu was appropriate.
3. SO₂, NO_x, CO, and VOC emission limits are based on AP-42 data dated 7/98.
4. Visible emissions from each natural gas fired unit shall not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period.

D. Annual Emissions

BHT shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility

Tons/year

(used to calculate the annual license fee)

	PM	PM ₁₀	SO ₂	NO _x	CO	VOC
Generator #1	0.6	0.6	0.2	15.2	4.0	0.4
Natural Gas Firing	0.5	0.5	0.1	1.0	0.8	0.1
Total TPY	1.1	1.1	0.3	16.2	4.8	0.5

III.AMBIENT AIR QUALITY ANALYSIS

Although maximum permitted emissions from BHT were below all modeling cutoffs (as defined in 06-096 CMR 115), given the capacity of Generator #1 and the extenuating circumstances (relatively short stack with much higher buildings surrounding the unit), the Department performed a refined AERMOD air dispersion modeling analysis to demonstrate that emissions from BHT will not cause or contribute to violations of Maine Ambient Air Quality Standards (MAAQS) for SO₂, PM₁₀, NO₂ or CO or to Class II increments for SO₂, PM₁₀ or NO₂.

The analysis demonstrated that BHT, in its existing configuration, could comfortably meet all SO₂, PM₁₀ and CO MAAQS and increment standards. However, the predicted annual NO₂ impact exceeded the respective MAAQS and increment standards. Given that the model assumed continuous operation Generator #1 for 8760 hours per year and that this air emissions license explicitly restricts operation of this unit to only 500 hours per year (less than 6% of a year) the Department is confident that BHT will comfortably meet all standards and increments for all criteria pollutants and is protective of public health impacts.

ORDER

Based on the above Findings and subject to conditions listed below, the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-1006-71-A-N subject to the following conditions.

Severability. The invalidity or unenforceability of any provision, or part thereof, of this License shall not affect the remainder of the provision or any other provisions. This License shall be construed and enforced in all respects as if such invalid or unenforceable provision or part thereof had been omitted.

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 M.R.S.A. §347-C).
- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [06-096 CMR 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an

extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [06-096 CMR 115]

- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [06-096 CMR 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [06-096 CMR 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [06-096 CMR 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [06-096 CMR 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [06-096 CMR 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [06-096 CMR 115]
- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [06-096 CMR 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters,

staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or

2. pursuant to any other requirement of this license to perform stack testing.
- B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
- C. submit a written report to the Department within thirty (30) days from date of test completion.

[06-096 CMR 115]

- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:

- A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
- B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and
- C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[06-096 CMR 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [06-096 CMR 115]

- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee

shall report all excess emissions in the units of the applicable emission limitation.
[06-096 CMR 115]

- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [06-096 CMR 115]

SPECIFIC CONDITIONS

(16) Generator #1

- A. Generator #1 is subject to, and shall comply with, the relevant parts of 40 CFR 60, Subpart IIII.
- B. Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 500 ppm. [40 CFR 60.4207(a)]
- C. Beginning October 1, 2010, Generator #1 shall fire only diesel fuel with a maximum sulfur content not to exceed 15 ppm. [40 CFR 60.4207(b)]
- D. BHT shall only operate Generator #1 for periods of maintenance and readiness testing, emergencies when off-site power is unavailable, and ISO New England OP-4 emergencies. [06-096 CMR 115, BACT]
- E. BHT shall keep records for OP-4 emergencies which include the date, start time and stop time for the generator, and documentation that BHT was contacted by ISO New England and asked to reduce consumption as part of an OP-4 event. [06-096 CMR 115, BACT]
- F. Generator #1 shall be limited to 100 hr/yr of operation for maintenance checks and readiness testing. Generator #1 shall be limited to 50 hours per year of operation in response to an OP-4 emergency. Generator #1 shall be limited to 500 hours per year of total operation. All of these limits are based on a 12 month rolling total. Compliance shall be demonstrated by a written log of all generator operating hours. [06-096 CMR 115, BACT]
- G. Generator #1 shall be equipped with a non-resettable hour meter. [06-096 CMR 115, BACT]

H. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
Generator #1	PM	0.12	06-096 CMR 103(2)(B)(1)(a)

I. Emissions shall not exceed the following [06-096 CMR 115, BPT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	SO ₂ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
Generator #1	2.28	2.28	0.98	60.80	16.15	1.71

J. Generator #1 is subject to PM, CO, and NO_x + VOC emission requirements set forth in 40 CFR 60, Subpart IIII. Compliance with these emission requirements shall be demonstrated by certification from the manufacturer that this engine class meets the appropriate Tier standards. [40 CFR 60, Subpart IIII]

K. BHT shall operate and maintain Generator #1 in accordance with the manufacturer's written instructions. BHT shall not change settings that are not approved in writing by the manufacturer. [40 CFR 60.4211(a)]

L. Visible emissions from Generator #1 shall not exceed 20% opacity on a six (6) minute block average, except for no more than two (2) six (6) minute block averages in a continuous 3-hour period. [06-096 CMR 101]

(17) **Natural Gas Fired Equipment**

A. Total natural gas fuel use for BHT shall not exceed 20,000,000 scf/year, based on a calendar year. Compliance shall be demonstrated by fuel records from the supplier showing the quantity of fuel delivered. [06-096 CMR 115, BACT]

B. Emissions shall not exceed the following:

Emission Unit	Pollutant	lb/MMBtu	Origin and Authority
B-1	PM	0.05	06-096 CMR 115, BACT
B-2	PM	0.05	06-096 CMR 115, BACT

C. Emissions shall not exceed the following [06-096 CMR 115, BACT]:

Emission Unit	PM (lb/hr)	PM ₁₀ (lb/hr)	NO _x (lb/hr)	CO (lb/hr)	VOC (lb/hr)
ERU-1	0.13	0.13	0.26	0.21	0.01
ERU-2	0.13	0.13	0.26	0.21	0.01
ERU-3	0.13	0.13	0.26	0.21	0.01
MAU-1	0.05	0.05	0.10	0.09	0.01
MAU-2	0.05	0.05	0.10	0.09	0.01
MAU-3	0.05	0.05	0.10	0.09	0.01
B-1	0.15	0.15	0.29	0.24	0.02
B-2	0.15	0.15	0.29	0.24	0.02
B-5	0.10	0.10	0.19	0.16	0.01
HWH-1	0.09	0.09	0.17	0.14	0.01
HWH-2	0.09	0.09	0.17	0.14	0.01
HWH-3	0.08	0.08	0.15	0.12	0.01
HWH-4	0.08	0.08	0.15	0.12	0.01

D. Visible emissions from each natural gas fired unit shall not exceed 10% opacity on a six (6) minute block average, except for no more than one (1) six (6) minute block average in a continuous 3-hour period. [06-096 CMR 101]

Bangor Historic Track, Inc.
Penobscot County
Bangor, Maine
A-1006-71-A-N

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Departmental
Findings of Fact and Order
Air Emission License
After the Fact

- (18) BHT shall notify the Department within 48 hours and submit a report to the Department on a quarterly basis if a malfunction or breakdown in any component causes a violation of any emission standard (38 M.R.S.A. §605).

DONE AND DATED IN AUGUSTA, MAINE THIS 1st DAY OF May, 2009.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: James P. Brubaker
DAVID P. LITTELL, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: 12/15/08

Date of application acceptance: 12/22/08

Date filed with the Board of Environmental Protection: _____

This Order prepared by Lynn Ross, Bureau of Air Quality.

